

Product Description SALSA® Binning DNA SD029-S02

Version S02.

Catalogue number: SD029: SALSA® Binning DNA, six reactions

To be used with the following SALSA MLPA probemixes: ME011-C1 MMR, ME042-C1 CIMP, P102-C1 HBB, P175-B1 Tumour Gain, P298-A1 BRAF-HRAS-KRAS-NRAS and P414-B1/C1 MDS, in combination with a SALSA® MLPA® reagent kit, available for various number of reactions. MLPA reagent kits are either provided with FAM or Cy5.0 dye-labelled PCR primer, suitable for Applied Biosystems and Beckman capillary sequencers, respectively (see www.mlpa.com).

Precautions and warnings: For professional use only. Always consult the most recent product description AND the corresponding probemix product description AND the MLPA General Protocol or the MS-MLPA General Protocol before use: www.mlpa.com. It is the responsibility of the user to be aware of the latest scientific knowledge of the application before drawing any conclusions from findings generated with this product.

Intended use: This SD029 DNA can be used as Binning DNA sample for the MLPA probemix versions as specified above and in Table 1. Binning and filtering are the processes of linking a signal to its probe identity by use of the probe length. The Binning DNA can also be used as an artificial positive control for the specific point mutations. See Table 1 and the corresponding probemix product description for more details on mutation-specific probe targets present.

Please note that this Binning DNA is a mixture of female genomic DNA from healthy individuals and artificial DNA of 50-80 nt length covering probe target sequences and not covering the whole exon.

This product is for research use only (RUO).

Experimental set up: MLPA reactions for binning purposes should be performed with 5 µl of Binning DNA, properly mixed. Inclusion of one reaction with SALSA Binning DNA SD029 in the initial MLPA experiment is essential as it can aid in data binning of the peak pattern using Coffalyser.Net software. Furthermore, Binning DNA should be included in the experiment whenever changes have been applied to the set-up of the capillary electrophoresis device (e.g. when a different polymer type is used).

Data analysis: Coffalyser.Net software must be used for analysis of MLPA experiments. When performing the fragment analysis step in Coffalyser.Net, select SD029 in the *bin smpl*-column. By selecting the SD029 sample as your binning sample, probes will be correctly identified in the peak pattern across all patient samples. Coffalyser.Net software is available free of charge on www.mlpa.com.

Warning: Binning DNA should never be used as a reference sample in the MLPA data analysis. Neither should it be used in quantification of mutation signal(s), as for this purpose true mutation/SNP positive patient samples or cell lines should be used. It is strongly advised to use sample and reference DNA extracted with the same method and derived from the same source of tissue.

Binning DNA content: MRC-Holland is unable to provide mutation positive human DNA samples. As an alternative, we have prepared a mixture of female genomic DNA from healthy individuals and a titrated amount of plasmid DNA that contains the target sequences recognised by the mutation-specific probes present in the MLPA probemix versions as specified above and in Table 1.

The plasmid DNA included in the SD029 DNA contains partial sequences of the *BRAF*, *HBB* and *JAK2* genes. These sequences include three different mutations which will be detected by MLPA probes that are present in the aforementioned probemix versions (for details, see Table 1) and will generate mutation-specific signals for these probes.

Please note that the plasmid DNA contains the target sequences detected by the above mentioned probes and the sequence of the 105 nt chromosome Y specific control fragment. The amount of plasmid in this Binning DNA (relative to the genomic DNA) results in a relative probe signal for the 105 nt probe on this female DNA which is similar to the relative probe signal obtained on male DNA samples. As a result, the 100 and 105 nt control fragments indicate the presence of two copies chromosome X and one copy chromosome Y.

Storage and stability: Upon arrival, Binning DNA must be stored between -25 °C and -15 °C, in the original packaging. When stored under the recommended conditions, a shelf life of at least 1 year is guaranteed, also after opening. The expiry date is mentioned on the label of the vial.

Table 1. Mutation-specific probe targets in SD029-S02 Binning DNA

Probemix	Gene/Exon	Probe length	Probe ID	Present in probemix version	Details
ME011	BRAF exon 15	226 nt	08780-SP0039-L08904	C1	c.1799T>A; p.Val600Glu
ME042	BRAF exon 15	226 nt	08780-SP0039-L08904	C1	c.1799T>A; p.Val600Glu
P102	HBB exon 1	214 nt	05830-L05307	C1	c.20A>T; p.Glu7Val
P175	BRAF exon 15	226 nt	08780-SP0039-L08904	B1	c.1799T>A; p.Val600Glu
P298	BRAF exon 15	229 nt	08780-SP0039-L21281	A1	c.1799T>A; p.Val600Glu
P414	JAK2 exon 14	208 nt	05672-L17742	B1/C1	c.1849G>T; p.Val617Phe

Note: Mutation nomenclature and exon numbering used here may differ from literature! Please notify us of any mistakes: info@mlpa.com. Please consult the respective probemix product description to find corresponding gene transcripts.

More information: www.mlpa.com; www.mlpa.eu

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Implemented Changes – compared to the previous SD029 product description versions

Version S02-16 – 16 April 2020 (15)

- P051-D1, P052-D1, P056-C1, P175-A3 and P190-C1 removed from list of MLPA probemixes on page 1 and Table 1
- P414-C1 added to list of MLPA probemixes on page 1 and Table 1.
- Various minor textual changes.
- Implemented changes box made shorter.

Version S02-15 – 26 July 2018 (15)

- ME011-C1 added to list with MLPA probemixes on page 1 and in Table 1.

Version S02-14 – 23 May 2018 (15)

- Information about P175-B1 probemix added in text on page 1 and in Table 1.

Version S02-13 - 27 July 2017 (15)

- Information about P175-A2 and P414-A1 probemixes removed.
- Precautions and warnings added on page 1.
- Various minor textual and layout changes.

Version 12 – 23 December 2016 (14)

- P045 and previous versions of P051, P052, P102, and ME042 removed from list with MLPA probemixes on page 1 and in Table 1.
- Minor textual and layout changes.

Version 11 (14) – 3 August 2016

- P414-B1 added to list with MLPA probemixes on page 1 and in Table 1.
- Note at Table 1 on 118 nt Y probe removed.
- Information about ME043-A1 and X073-X1 probemixes removed on page 1 and in Table 1.

Version 10 (14) – 14 July 2016

- Information about X073-X1 probemix added on page 1 and in Table 1.

Version 09 (14) – 6 July 2016

- List with MLPA probemixes updated on page 1 and in Table 1.
- Information on 118 nt chromosome Y specific probe for P414 probemix added to Table 1.
- Minor textual and layout changes.

Version 08 (12) – 16 February 2016

- Corrected exon numbers of mutations c.1100delC, CHEK2 gene and c.88G>C, SCNA gene in Table 1: 11 and 2 resp.

- Statement on use for IVD purposes added.
- Minor textual and layout changes.